

WHAT IS CLAIMED IS:

1. A ladder-type bulk acoustic wave filter, comprising:

an input terminal for receiving an electrical signal including a certain frequency signal;

an output terminal for outputting an electrical signal with a frequency within a predetermined pass band;

a ground terminal connected to ground;

a plurality of series resonators connected in series between the input terminal and the output terminal;

a plurality of shunt resonators having first ends each connected to an arbitrary contact point of the plurality of series resonators and second ends commonly connected to each other; and

a common ground inductor for connecting a common terminal of the plurality of shunt resonators to the ground terminal.

2. The ladder-type bulk acoustic wave filter according to claim 1, wherein the common ground inductor has an inductance of approximately 1nH or less.

3. The ladder-type bulk acoustic wave filter according to claim 1, wherein the common ground inductor is implemented by a meander or spiral conductive pattern formed on a chip of the bulk acoustic wave filter.

4. The ladder-type bulk acoustic wave filter according to claim 1, wherein the common ground inductor is implemented by a conductive pattern formed on a package of the bulk acoustic wave filter or a printed circuit board on which the bulk acoustic wave filter is mounted.

5. The ladder-type bulk acoustic wave filter according to claim 1, wherein the common ground inductor is implemented by a bonding wire for connecting the common terminal of the plurality of shunt resonators to a ground terminal of a printed circuit board on which the bulk acoustic wave filter is mounted.

6. The ladder-type bulk acoustic wave filter according to claim 1, wherein the common ground inductor is implemented by a lumped element.

7. The ladder-type bulk acoustic wave filter according to claim 1, wherein the ladder-type bulk acoustic wave filter is implemented so that:

four series resonators are connected in series between the input and output terminals; and

three shunt resonators are each connected to a contact point of any two of the four series resonators.

8. The ladder-type bulk acoustic wave filter according to claim 1, wherein the ladder-type bulk

acoustic wave filter is implemented so that:

first to fourth series resonators are sequentially connected in series between the input and output terminals; and

first and second shunt resonators are connected to a first contact point of the input terminal and the first series resonator and a second contact point of the second and third series resonators, respectively.